RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

09/911,692 C
IFWO
08/29/2005

ENTERED



IFWO

RAW SEQUENCE LISTING DATE: 08/29/2005
PATENT APPLICATION: US/09/911,692C TIME: 14:59:23

Input Set : E:\09-911692 SL4.txt

3 <110> APPLICANT: Biogen Idec Inc.
4 Anderson, Darrell R.

Rastetter, William H.

4 5 Output Set: N:\CRF4\08292005\I911692C.raw

```
6
         Hanna, Nabil
 7
         Leonard, John E.
 8
         Newman, Roland
 9
         Reff, Mitchell
11 <120> TITLE OF INVENTION: EXPRESSION AND USE OF ANTI-CD20 ANTIBODIES
13 <130> FILE REFERENCE: 27693-01009
15 <140> CURRENT APPLICATION NUMBER: 09/911,692C
16 <141> CURRENT FILING DATE: 2001-07-25
18 <150> PRIOR APPLICATION NUMBER: US 08/475,813
19 <151> PRIOR FILING DATE: 1995-06-07
21 <150> PRIOR APPLICATION NUMBER: US 08/149,099
22 <151> PRIOR FILING DATE: 1993-11-03
24 <150> PRIOR APPLICATION NUMBER: US 07/978,891
25 <151> PRIOR FILING DATE: 1992-11-13
27 <160> NUMBER OF SEQ ID NOS: 11
29 <210> SEO ID NO: 1
30 <211> LENGTH: 8540
31 <212> TYPE: DNA
32 <213> ORGANISM: Artificial Sequence
34 <220> FEATURE:
35 <223> OTHER INFORMATION: vector
37 <400> SEQUENCE: 1
38 gaegtegegg eegetetagg eetecaaaaa ageeteetea etaettetgg aatageteag
                                                                          60
39 aggccgaggc ggcctcggcc tctgcataaa taaaaaaaat tagtcagcca tgcatggggc
                                                                         120
40 ggagaatggg cggaactggg cggagttagg ggcgggatgg gcggagttag gggcgggact
                                                                         180
41 atggttgctg actaattgag atgcatgctt tgcatacttc tgcctgctgg ggagcctggg
                                                                         240
42 gactttccac acctggttgc tgactaattg agatgcatgc tttgcatact tctgcctgct
                                                                         300
43 ggggagcctg gggactttcc acaccctaac tgacacacat tccacagaat taattcccct
                                                                         360
44 agttattaat agtaatcaat tacggggtca ttagttcata gcccatatat ggagttccgc
                                                                         420
45 gttacataac ttacggtaaa tggcccgcct ggctgaccgc ccaacgaccc ccgcccattg
                                                                         480
46 acgtcaataa tgacgtatgt tcccatagta acgccaatag ggactttcca ttgacgtcaa
                                                                         540
47 tgggtggact atttacggta aactgcccac ttggcagtac atcaagtgta tcatatgcca
                                                                         600
48 agtacgcccc ctattgacgt caatgacggt aaatggcccg cctggcatta tgcccagtac
                                                                         660
49 atgacettat gggaetttee tacttggeag tacatetaeg tattagteat egetattaee
                                                                         720
50 atggtgatgc ggttttggca gtacatcaat gggcgtggat agcggtttga ctcacgggga
                                                                         780
51 tttccaagtc tccaccccat tgacgtcaat gggagtttgt tttggcacca aaatcaacgg
                                                                         840
52 gactttccaa aatgtcgtaa caactccgcc ccattgacgc aaatgggcgg taggcgtgta
                                                                         900
53 cggtgggagg tctatataag cagagctggg tacgtgaacc gtcagatcgc ctggagacgc
                                                                         960
54 catcacagat ctctcaccat gagggtcccc gctcagctcc tggggctcct gctqctctqq
                                                                        1020
55 ctcccaggtg cacgatgtga tggtaccaag gtggaaatca aacgtacggt ggctgcacca
                                                                        1080
```

Input Set : E:\09-911692_SL4.txt

Output Set: N:\CRF4\08292005\1911692C.raw

			atctgatgag				1140
			tcccagagag				1200
			ggagagtgtc				1260
59	agcctcagca	gcaccctgac	gctgagcaaa	gcagactacg	agaaacacaa	agtctacgcc	1320
60	tgcgaagtca	cccatcaggg	cctgagctcg	cccgtcacaa	agagcttcaa	caggggagag	1380
61	tgttgaattc	agatccgtta	acggttacca	actacctaga	ctggattcgt	gacaacatgc	1440
62	ggccgtgata	tctacgtatg	atcagcctcg	actgtgcctt	ctagttgcca	gccatctgtt	1500
			ttccttgacc				1560
			atcgcattgt			-	1620
			gggggaggat				1680
			agctggggct				1740
			cccgcctggc				1800
			tacgtattag				1860
			ggatagcggt				1920
			ttgttttggc			-	1980
			acgcaaatgg				2040
							2100
			ctcacattca		-		2160
			gctcttcctt				
			cctggcaccc				2220
			ggactacttc				2280
			gcacaccttc				2340
			cgtgccctcc				2400
			caacaccaag				2460
			accgtgccca				2520
			caaggacacc				2580
			ccacgaagac				2640
			caagacaaag				2700
			cgtcctgcac				2760
			cctcccagcc				2820
			ggtgtacacc	_			2880
			cctggtcaaa				2940
			ggagaacaac				3000
			cagcaagctc				3060
89	aacgtcttct	catgctccgt	gatgcatgag	gctctgcaca	accactacac	gcagaagagc	3120
90	ctctccctgt	ctccgggtaa	atgaggatcc	gttaacggtt	accaactacc	tagactggat	3180
91	tcgtgacaac	atgcggccgt	gatatctacg	tatgatcagc	ctcgactgtg	ccttctagtt	3240
92	gccagccatc	tgttgtttgc	ccctcccccg	tgccttcctt	gaccctggaa	ggtgccactc	3300
93	ccactgtcct	ttcctaataa	aatgaggaaa	ttgcatcgca	ttgtctgagt	aggtgtcatt	3360
			gggcaggaca				3420
			ggctctatgg				3480
			ctcaatttct				3540
			agttgattga				3600
			ataaggacaa				3660
			gcacagcatt				3720
						g gatagagagg	3780
						acatttgctt	3840
						gatttcgcgc	3900
						tgccatcatg	3960
						g caagaacgga	4020
	J J	J 3		,		,	

Input Set : E:\09-911692_SL4.txt

Output Set: N:\CRF4\08292005\I911692C.raw

			caggaacgag				4080
106	tcttcagtgg	aaggtaaaca	gaatctggtg	attatgggta	ggaaaacctg	gttctccatt	4140
			aaaggacaga				4200
108	gaaccaccac	gaggagctca	ttttcttgcc	aaaagtttgg	atgatgcctt	aagacttatt	4260
109	gaacaaccgg	aattggcaag	taaagtagac	atggtttgga	tagtcggagg	cagttctgtt	4320
110	taccaggaag	ccatgaatca	accaggccac	cttagactct	ttgtgacaag	gatcatgcag	4380
			tttcccagaa				4440
112	gaatacccag	gcgtcctctc	tgaggtccag	gaggaaaaag	gcatcaagta	taagtttgaa	4500
			acaggaagat				4560
114	tcatgcattt	ttataagacc	atgggacttt	tgctggcttt	agatcagcct	cgactgtgcc	4620
115	ttctagttgc	cagccatctg	ttgtttgccc	ctccccgtg	ccttccttga	ccctggaagg	4680
116	tgccactccc	actgtccttt	cctaataaaa	tgaggaaatt	gcatcgcatt	gtctgagtag	4740
			gtggggtggg				4800
			atgcggtggg				4860
			ttatttgcat				4920
			agcaaatgcg				4980
			aacattattc				5040
			tctagggaga				5100
			agggccaatc				5160
			aggtaggatc	_			5220
			gatcctctat				5280
			ggctattcgg				5340
			ggctgtcagc		_		5400
			atgaactgca				5460
			cagctgtgct				5520
			cggggcagga				5580
			atgcaatgcg	_	_		5640
			aacatcgcat				5700
			tggacgaaga				5760
			tgcccgacgg				5820
			tggaaaatgg				5880
			atcaggacat				5940
			accgcttcct				6000
			gccttcttga				6060
			gcccaacctg				6120
			cggaatcgtt		-		6180
			gttcttcgcc				6240
			catcacaaat		-	-	6300
			actcatcaat				6360
			taatcatggt				6420
			atacgagccg				6480
			ttaattgcgt				6540
			taatgaatcg				6600
			tcgctcactg				6660
			aaggcggtaa				6720
			aaaggccagc				6780
			ctccgccccc				6840
			acaggactat				6900
			ccgaccctgc				6960
100	cccccgcgcg	Ciciony	ccyaccccgc	cycliacogg	ataccigico	gootttotoo	0300

Input Set : E:\09-911692_SL4.txt

Output Set: N:\CRF4\08292005\1911692C.raw

154	cttcgggaag	cgtggcgctt	tctcaatgct	cacgctgtag	gtatctcagt	tcggtgtagg	7020
155	tcgttcgctc	caagctgggc	tgtgtgcacg	aaccccccgt	tcagcccgac	cgctgcgcct	7080
156	tatccggtaa	ctatcgtctt	gagtccaacc	cggtaagaca	cgacttatcg	ccactggcag	7140
157	cagccactgg	taacaggatt	agcagagcga	ggtatgtagg	cggtgctaca	gagttcttga	7200
158	agtggtggcc	taactacggc	tacactagaa	ggacagtatt	tggtatctgc	gctctgctga	7260
					cggcaaacaa		7320
					cagaaaaaaa		7380
					gaacgaaaac		7440
					gatcctttta		7500
					gtctgacagt		7560
					ttcatccata		7620
165	tccccgtcgt	gtagataact	acgatacggg	agggcttacc	atctggcccc	agtgctgcaa	7680
					agcaataaac		7740
					ctccatccag		7800
				_	tttgcgcaac		7860
169	ttgctacagg	catcgtggtg	tcacgctcgt	cgtttggtat	ggcttcattc	agctccggtt	7920
					caaaaaagcg		7980
					gttatcactc		8040
					atgcttttct		8100
					accgagttgc		8160
					aaaagtgctc		8220
					gttgagatcc		8280
					tttcaccagc		8340
					aagggcgaca		8400
					ttatcagggt		8460
	_				aataggggtt	-	8520
	ttccccgaaa				3333	3 2	8540
	<210> SEQ 1						
	<211> LENGT						
	<212> TYPE:						
185	<213> ORGAN	NISM: Artifi	icial Sequer	nce			
	<220> FEATU						
188	3 <223> OTHER INFORMATION: vector with chimeric antibody sequence						
	<400> SEQUE				-	•	
191	gacgtcgcgg	ccgctctagg	cctccaaaaa	agcctcctca	ctacttctgg	aatagctcag	60
					tagtcagcca		120
193	ggagaatggg	cggaactggg	cggagttagg	ggcgggatgg	gcggagttag	gggcgggact	180
194	atggttgctg	actaattgag	atgcatgctt	tgcatacttc	tgcctgctgg	ggagcctggg	240
195	gactttccac	acctggttgc	tgactaattg	agatgcatgc	tttgcatact	tctgcctgct	300
					tccacagaat		360
					gcccatatat		420
					ccaacgaccc		480
					ggactttcca		540
					atcaagtgta		600
					cctggcatta		660
					tattagtcat		720
					accggtttga		780
					tttggcacca		840
					aaatgggcgg		900
	-		-	, ,			

Input Set : E:\09-911692_SL4.txt

Output Set: N:\CRF4\08292005\I911692C.raw

			cagagctggg				960
	_		ggattttcag		-		1020
			aggacaaatt	_		-	1080
						aagttacatc.	1140
210	cactggttcc	agcagaagcc	aggatcctcc	cccaaaccct	ggatttatgc	cacatccaac	1200
211	ctggcttctg	gagtccctgt	tcgcttcagt	ggcagtgggt	ctgggacttc	ttactctctc	1260
212	acaatcagca	gagtggaggc	tgaagatgct	gccacttatt	actgccagca	gtggactagt	1320
213	aacccaccca	cgttcggagg	ggggaccaag	ctggaaatca	aacgtacggt	ggctgcacca	1380
214	tctgtcttca	tcttcccgcc	atctgatgag	cagttgaaat	ctggaactgc	ctctgttgtg	1440
215	tgcctgctga	ataacttcta	tcccagagag	gccaaagtac	agtggaaggt	ggataacgcc	1500
216	ctccaatcgg	gtaactccca	ggagagtgtc	acagagcagg	acagcaagga	cagcacctac	1560
217	agcctcagca	gcaccctgac	gctgagcaaa	gcagactacg	agaaacacaa	agtctacgcc	1620
218	tgcgaagtca	cccatcaggg	cctgagctcg	cccgtcacaa	agagcttcaa	caggggagag	1680
			acggttacca				1740
			atcagcctcg				1800
			ttccttgacc				1860
			atcgcattgt				1920
			gggggaggat				1980
			agctggggct				2040
			cccgcctggc	·		_	2100
			tacgtattag				2160
			ggatagcggt	-			2220
			ttgttttggc				2280
			acgcaaatgg			-	2340
			ctcacattca				2400
			gctcttcctt				2460
		_	ggctgagctg			-	2520
	_		atttaccagt				2580
			tggagctatt	_		-	2640
			cacattgact				2700
			tgaggactct				2760
			caatgtctgg			_	2820
			ggtcttcccc				2880
			cctggtcaag				2940
			cagcggcgtg				3000
			cgtggtgacc			-	3060
			caagcccagc			_	3120
			cacatgccca				3180
			cccaaaaccc				3240
			ggacgtgagc				3300
			gcataatgcc				3360
			cgtcctcacc				3420
							3480
			caacaaagcc				3540
			agaaccacag				3600
			cctgacctgc				3660
			tgggcagccg				
			cttcctctac				3720
			atgctccgtg				3780
254	cagaagagcc	tctccctgtc	tccgggtaaa	tgaggatccg	ttaacggtta	ccaactacct	3840

VERIFICATION SUMMARY

DATE: 08/29/2005 TIME: 14:59:24

PATENT APPLICATION: US/09/911,692C

Input Set : E:\09-911692_SL4.txt

Output Set: N:\CRF4\08292005\1911692C.raw